

DEFENSE MAPPING AGENCY

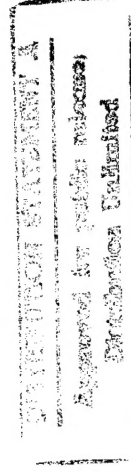
FY 1997 BUDGET ESTIMATE SUBMISSION

RDT&E, DEFENSE-WIDE

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MARCH 1996



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**DEFENSE MAPPING AGENCY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE
FY 1997 BUDGET ESTIMATES**

(\$ In Thousands)

SECUR CLASS	BUDGET ACTIVITY	RESEARCH PROGRAM CATEGORY	ELEMENT	TITLE	FY 1995		FY 1996		FY 1997	
					TOA		TOA		TOA	
(U)	7			Operational Systems Development	76,228		71,932		100,997	
(U)	7	6.6		Operational Systems Development (Other)	76,228		71,932		100,997	
(U)	7	6.6	0305139B	DMA MC&G Production System Improvement	60,478		71,932		100,997	
(U)	7	6.6	0305159B	Defense Reconnaissance Support Activities	15,750		0		0	
Total RDT&E - Direct					76,228		71,932		100,997	
Reimbursements					10		850		850	
TOTAL PROGRAM					76,238		72,782		101,847	

Note: Beginning in FY 1996, Defense Reconnaissance Support Activities (DRSA) (PE 0305159B) was merged into DMA MC&G Production System Improvement (PE 0305139B) because the activities contained in DRSA evolved into enhancements to the overall DMA MC&G production system.

This budget is included in the Joint Military Intelligence Program (JMIP) Congressional Justification Book.

EXHIBIT R-1

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DEFENSE MAPPING AGENCY
FY 1997 BUDGET ESTIMATE SUBMISSION
RDT&E, DEFENSE-WIDE

PROGRAM ELEMENT COMPARISON SUMMARY
INTRODUCTION AND EXPLANATION OF CONTENTS

PROGRAM ELEMENT

REMARKS

Budget Activity 7: Operational
Systems Development

0305139B DMA MC&G Production
System Improvement

FY 95 program reflects a \$3,798 thousand reprogramming from 0305159B Defense Reconnaissance Support Activities and a \$83 thousand internal DoD reduction as adjustments to the FY 1996/1997 President's Budget Submission.

Beginning in FY 1996, 0305159B Defense Reconnaissance Support Activities (DRSA) merges into 0305139B DMA MC&G Production System Improvement because the activities contained in DRSA have evolved into enhancements to the overall MC&G production system and therefore are more appropriately justified in 0305139B DMA MC&G Production System Improvement.

0305159B Defense Reconnaissance
Support Activities

FY 95 program reflects a \$3,798 thousand reprogramming to 0305139B MC&G Production System Improvement.

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Defense Mapping Agency FY 1997 Budget Estimates
RDTE&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDTE&E, Defense-Wide/7

R-1 Item Nomenclature

Program Element (PE): DMA MC&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Total Program Element (PE) Cost	60,478	71,932	100,997	70,135	103,090	115,777	71,045	Cont	Cont
Project 100 New Products	28,294	15,967	14,566	13,789	16,030	18,996	18,422	Cont	Cont
Project 200 New Processes	20,986	38,808	70,110	41,366	64,160	78,269	32,583	Cont	Cont
Project 300 New Concepts	11,198	17,157	16,321	14,980	22,900	18,512	20,040	Cont	Cont

A. (U) Mission Description and Budget Item Justification:

This program element includes RDTE&E costs associated with modifying, upgrading, or improving the Defense Mapping Agency (DMA) production system and any related Mapping, Charting and Geodesy (MC&G) development activities that: (1) foster new DMA products; (2) introduce, improve, or adapt DMA operational processes to enhance interfaces or functionality; and (3) use new technology in the development of concepts that enhance processes and products, including the evolution of the MC&G production system to provide global geospatial information and services on-line electronically to military customers world-wide.

MC&G Production System Improvement (PE 0305139B) is found in Budget Activity 7 (Operational Systems Development) because the effort funded under this element supports the DMA MC&G production system. Beginning in FY 1996, Defense Reconnaissance Support Activities (DRSA) (PE 0305159B) was merged into this PE because the activities contained in DRSA evolved into enhancements to the overall DMA MC&G production system.

B. (U) Program Change Summary

	FY 1995	FY 1996	FY 1997	Total Cost
FY 1996/1997 President's Budget	56,763	80,131	83,932	Cont
Adjustments to Appropriated Value				
Program Decision Memorandum I increase for exploitation of the Enhanced Imagery System and migration of the MC&G Production System			20,300	
Reprogrammed from Defense Reconnaissance Support Activities (PE 0305159B)	3,798			
Congressional Reduction		-6,838		
Inflation Adjustment		-1,361	-3,235	
OSD Management Adjustment	-83			
Current Budget Submit/President's Budget	60,478	71,932	100,997	Cont

FY 1996/1997 President's Budget

Adjustments to Appropriated Value

Program Decision Memorandum I increase for exploitation of the Enhanced Imagery System and migration of the MC&G Production System

Reprogrammed from Defense Reconnaissance

Support Activities (PE 0305159B)

Congressional Reduction

Inflation Adjustment

OSD Management Adjustment

Current Budget Submit/President's Budget

Change Summary Explanation:

The increases in FY 1996 and FY 1997 to MC&G Production System Improvement (PE 0305139B) reflect the transfer of funds previously identified under Defense Reconnaissance Support Activities (PE 0305159B). The FY 1997 increase also reflects a Program Decision Memorandum increase to develop the capability to exploit the Enhanced Imagery System which is replacing DMA's existing primary imagery source, and to migrate the DMA MC&G production system to an open-systems, standards-based architecture that relies on commercial-off-the-shelf products and is designed for easy insertion of new technology and system expansion.

Exhibit R-2

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**Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7		R-1 Item Nomenclature Program Element (PE): DMA MC&G Production System Improvement/0305139B								
Cost (in \$ Thousands)		FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
		28,294	15,967	14,566	13,789	16,030	18,996	18,422	Cont	Cont
Project 100 New Products										

(U) Project Justification Narrative:

- (U) As a combat support agency, DMA is responsible for development and production of new Mapping, Charting, and Geodesy (MC&G) products to meet evolving customer requirements. Key product initiatives include:
 - The Digital Products Data Base (DPDB) which will interface with current and emerging digital systems and will be the primary repository for DMA's digital products.
 - The Master Seafloor Digital Data Base (MSDDB) which is a cooperative effort between Navy, the National Oceanographic and Atmospheric Administration (NOAA), and DMA and will provide these agencies the capability to process and fuse hydrographic/bathymetric and marine geophysical source data holdings to satisfy future hydrographic charting needs and database accessibility.
 - Development of a suite of digital thematically-layered vector products, such as Urban Vector Map (UVMAP), Littoral Supplemental Layer, and Tactical Terrain Data (TTD), designed to support analytical functions of Military Geographic Information Systems currently being integrated into Electronic Battlefield architectures. UVMAP will support evacuation plans and intelligence operations; Littoral Supplemental Layer will support beach assaults/operations; and TTD will support cross-country movement analysis.
 - The Point Positioning Production System (PPPS) which supports the warrior in deriving accurate coordinates for identifiable features within a supported geographical area. PPPS will be used primarily for targeting and mission planning.
 - The Digital Flight Information Publications which will support the Services' mission planning, advanced cockpit and simulator graphics, in-flight operations, and air traffic control by replacing existing paper products.
 - New Product Implementation which modifies the MC&G Production System to allow implementation of future products more effectively and efficiently.
 - Controlled Image Base (CIB) which will support mission planning and theater battle management systems, mission profile development, and medium-accuracy point targeting.
 - Joint Mapping Toolkit (JMTK) which addresses the mapping requirements identified for the Global Command and Control System (GCCS). As the Executive Agent for Mapping, Charting, Geodesy, and Imagery (MCG&I) in GCCS, DMA is developing standard interoperable MCG&I exploitation software which will provide the warfighter with a fused, real-time true picture of the battlefield.
 - Terrain Modeling and Simulation activities which respond to emerging customer requirements for accurate, timely representations of the terrain in support of modeling, simulation, mission planning/rehearsal and combat operations. As the DoD Modeling and Simulation Executive Agent for Terrain, DMA is prototyping MC&G terrain products/data sets.

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2, Exhibit)

Date: March 1996

- (U) FY 1995: Continued design and development of the Master Seafloor Digital Data Base (MSDDB) (\$12,382); continued design of the Digital Products Data Base (DPDB) (\$2,028); continued development of new image-based products such as Controlled Image Base (CIB) (\$1,849); continued development of multi-resolution, data-layered, vector products with Urban Vector Map (UVMAP), Littoral Supplemental Layer, and Tactical Terrain Data (TTD) (\$9,484); commenced standard establishment of Digital Text Standards and developed a prototype Digital Sailing Directions for evaluation (\$495); completed delivery and began production on the Point Positioning Production System (PPPS) (\$1,324); began design of a Digital Flight Information Publication (DFLIP) production capability (\$205); and performed other MC&G new product activities (\$527).
- (U) FY 1996: Continue development of the MSDDB (\$2,000); incorporate the DPDB into the production system (\$2,500); continue development of multi-resolution, data-layered, vector products (\$6,326); begin development of the Joint Mapping Toolkit for GCCS (\$3,500); continue prototype development and evaluation of Digital Text Standards with Automated Notice to Mariners, List of Lights, and Digital Fleet Guides (\$500); and perform other MC&G new product activities (\$1,141).
- (U) FY 1997: Deliver the MSDDB production system (\$2,000); complete the development of multi-resolution, data-layered, vector products (\$1,350); develop the New Product Implementation (\$2,500); complete the DPDB (\$3,600); complete prototype development and evaluation of Digital Text Standards with Flight Planning Guides (\$500); complete prototyping and evaluation of Digital Flight Information Publication (DFLIP) (\$500); continue development of the Joint Mapping Toolkit for GCCS (\$3,300); develop a capability for rapid terrain data generation and exploitation (\$716); and perform other MC&G new product activities (\$100).

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Defense Mapping Agency FY 1997 Budget Estimates
RDTE&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDTE&E, Defense-Wide/7

R-1 Item Nomenclature

Program Element (PE): DMA MC&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 100 New Products	28,294	15,967	14,566	13,789	16,030	18,996	18,422	Cont	Cont

C. (U) Other Program Funding Summary

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Procurement:	5,183	2,321	4,100 ¹	1,845 ¹	2,800 ¹	3,501 ¹	4,434 ¹	Cont	Cont

D. (U) Schedule Profile

D. (U) Schedule Profile	FY 1995				FY 1996				FY 1997			
	1	2	3	4	1	2	3	4	1	2	3	4
Image-based Products				D	C							
Master Seafloor Digital Data Base (MSDDB)												D
Point Positioning Production System (PPPS)	D	C										
Vector Formatted Products - Interim Terrain Data (ITD), Urban Vector Map (UVMAP), Tactical Terrain Data (TTD), Littoral Supplemental Layer		D				D		D		C		
Digital Products Data Base (DPDB)												C
Digital Text Standards			AOC					D				D
Digital Flight Information Publications (DFLIP)			AOC			D			D		D	
Joint Mapping Toolkit										AOC		
Terrain Modeling/Simulation												AOC

AOC-Award of Contract

D-Delivery

C-Completion

¹Funds identified in FY 1997-FY 2001 have been transferred to the Operations and Maintenance appropriation in accordance with expense/investment criteria policy change.

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Defense Mapping Agency FY 1997 Budget Estimates

RD&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RD&E, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): DMA MC&G Production System Improvement/02051398

A. Project Cost Breakdown (\$ in Thousands)

Project 100 New Products

	FY 1995	FY 1996	FY 1997
Project Cost Categories:			
Primary Hardware Development			
Ancillary Hardware Development			
Development Support Equipment			
Acquisition		734	
Research Support Equipment	2,094		
Acquisition	28	559	5
Software Development	4,942	2,977	2,687
Licenses	1,386	367	187
Systems Engineering	4,867	2,651	3,146
Training Development	1,103	287	350
Integrated Logistics Support	283	287	345
Quality Assurance	425	64	248
Reliability, Maintainability, and Availability	28	48	131
Configuration Management	1,358	1,038	670
Technical Data	509	399	612
Developmental Test and Evaluation	2,650	998	218
Operational Test and Evaluation	1,103	607	1,434
Contractor Engineering Support	3,822	2,044	1,894
Government Engineering Support	1,811	1,645	1,515
Program Management Support	1,188	655	641
Program Management Personnel	226	160	87
Travel	538	367	350
Research Personnel	113	80	46
Miscellaneous	20		
TOTAL	28,294	15,967	14,566

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Defense Mapping Agency FY 1997 Budget Estimates

RDTE Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDTE, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE): DNA MC&G Production System Improvement/0305139B

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project 100 New Products										
Point Positioning Production System E-Systems	C/CPAF/MIPR	Sep-92	9,833	9,833	8,413	1,324	96	0	0	9,833
Vector Product Implementation Intergraph	SS/CPIF/Reqn	Oct-94	17,258	17,258	10,111	3,980	2,767	400	0	17,258
Tactical Terrain Data (TTD) Various	SS/CPAF/Reqn	Dec-94	7,199	7,199	244	4,155	2,600	200	0	7,199
Product Definition Various	C/CPIF/Reqn	Jul-95	2,885	2,885	0	1,176	959	750	0	2,885
Master Seafloor Digital Data Base E-Systems	C/CPAF/Reqn	Sep-94	25,430	25,430	2,548	12,382	2,000	2,000	6,500	25,430
Controlled Image Base Production System Hughes	SS/CPFF/Reqn	Sep-94	3,106	3,106	712	1,849	445	100	0	3,106
Digital Gazetteer on CD-ROM Intergraph	C/CPAF/Reqn	Mar-95	270	270	0	170	100	0	0	270
Digital Products Data Base Various	C/CPAF/Reqn	Jun-95	8,766	8,766	638	2,028	2,500	3,600	0	8,766
New Product Implementation Various	C/CPAF/Reqn	Feb-97	Cont	Cont	0	0	0	2,500	Cont	Cont
Joint Mapping Toolkit Various	MIPR	Mar-96	Cont	Cont	0	0	3,500	3,300	Cont	Cont
Terrain Modeling/Simulation Unknown	MIPR	Jun-97	Cont	Cont	0	0	0	716	Cont	Cont
Miscellaneous Various	Various	Various	5,306	5,306	2,076	1,230	1,000	1,000	0	5,306
Product Development Organizations Total										
			Cont	Cont	24,742	28,294	15,967	14,566	Cont	Cont
Support and Management Organizations Total										
			0	0	0	0	0	0	0	0
Test and Evaluation Organizations Total										
			0	0	0	0	0	0	0	0
Government Furnished Property Total										
			0	0	0	0	0	0	0	0

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Defense Mapping Agency FY 1997 Budget Estimates

RDTEG Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDTEG, Defense-Wide/7
 R-1 Item Nomenclature
 Program Element (PE) 11 DMA M&G Production System Improvement/0105139B

B. Budget Acquisition History and Planning Information (Continued)

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations									
Project 100 New Products									
Product Development Property Total									
Support and Management Property Total				0	0	0	0	0	0
Test and Evaluation Property Total				0	0	0	0	0	0
Subtotal Product Development				24,742	28,294	15,967	14,566	Cont	Cont
Subtotal Support and Management				0	0	0	0	0	0
Subtotal Test and Evaluation				0	0	0	0	0	0
Total Project:				24,742	28,294	15,967	14,566	Cont	Cont

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Exhibit R-3

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Defense Mapping Agency FY 1997 Budget Estimates
RDTE&B Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDTE&B, Defense-Wide/7

R-1 Item Nomenclature
Program Element (PE): DMA MC&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to	
								Complete	Total
Project 200 New Processes	20,986	38,808	70,110	41,366	64,160	78,269	32,583	Cont	Cont

(U) Project Justification Narrative:

- (U) As a combat support agency, DMA is responsible for establishing and maintaining the production processes required to support Service and Command Mapping, Charting, and Geodetic (MC&G) requirements. DMA's digital data are a critical requirement of modern precision guided weapons and analytical systems. The focus of DMA's new process initiatives is to enhance the Agency's capability and capacity to produce and deliver digital data to the warfighter instantly and anywhere needed around the globe. Key initiatives within this project include:
 - Crisis support enhancements which will increase the flexibility of the digital production system to provide rapid responses to CINC and Service crisis requirements.
 - Operability improvements which will enhance the flexibility and effectiveness of the DMA production system and increase responsiveness to the warfighter; i.e., improve DMA's ability to extract MC&G information from source materials, improve automated algorithms to increase finishing throughput, and improve speed and accuracy in source analysis processes. These will allow the Agency to sustain productivity with a reduced workforce.
 - Migration of the DMA MC&G production system which will allow transition to an open-systems, standards-based architecture that relies on commercial-off-the-shelf products and is designed for easy insertion of new technology and system expansion. Without migration, system aging and inability to leverage off technology advancements will degrade DMA's ability to support deployment of weapon systems and C4I systems, potentially endangering military operations.
 - Exploitation of Enhanced Imagery System (EIS) provides for the mandatory replacement of DMA's existing primary imagery source and results in an enhancement to the current capability; i.e., the exploitation of hybrid radar which provides an all-weather, day-night data collection source.
 - GGI&S Data Warehouse which will provide a digital repository of Global Geospatial Information globally accessible to DMA customers.
 - Global transmission of Global Geospatial Information to military forces via satellite link and high speed fiber optic networks.
 - The Hydrographic Source Assessment System (HYSAS) which is a cooperative effort between Navy, NOAA, and DMA, related to MSDDb, which provides the capability to acquire and manage hydrographic/bathymetric source data and provide the Navy and other users the ability to produce digital navigation products.
 - The Modernized Catalog System (MCS) which provides for the basic generation of both soft copy and hard copy catalogs for the CINCs and Services with the capability to update soft copy catalogs via electronic connections.

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

- Implementation of an interface from the Defense Intelligence Agency (DIA) Migration Integrated Data Base (MIDB) to the DMA production system which will enhance the utilization of the data in DMA production processes as well as providing data to support population of the MIDB.
- Migration of the Source Acquisition System architecture to a centralized operation which provides for improved access and responsiveness to DMA production operations.
- The Navigation Safety System which will allow DMA to integrate text and feature-based processes to support Navy, Coast Guard, foreign, and civilian (maritime) users.
- Beginning in FY 1996, this project also includes initiatives previously identified under Defense Reconnaissance Support Activities (PE 0305159B) to implement MC&G data exploitation from commercial systems (e.g., LANDSAT, SPOT and emerging one- and three-meter commercial systems), Synthetic Aperture Radar, and foreign national sources. Developments address data extraction algorithms and operational scenarios and include development of capabilities to process, integrate, and archive commercial image source into the existing DMA production system and increase crisis response capability.
- (U) FY 1995: Performed operability improvements on the delivered Digital Production System (DPS) to improve performance (\$7,015); performed crisis support enhancements (\$2,904); continued modernization of the Gravity & Geodesy portion of the DMA MC&G production system (\$1,359); began engineering development of the Hydrographic Source Assessment System (HYSAS) (\$2,700); continued reconfiguration of mainframe computer architecture (\$1,916); began development of an externally mandated new interface to the Defense Intelligence Agency (DIA) Migration Integrated Data Base (MIDB) (\$279); completed upgrade of the Source Acquisition Segment interfaces (\$258); completed development of the Modernized Catalog System (MCS) (\$1,534); began development of the Navigation Safety System (\$729); and performed other MC&G new process activities (\$2,292).
- (U) FY 1996: Continue operability improvements on the delivered DPS to improve performance consistent with and in support of the planned migration of the DMA MC&G production system (\$11,445); continue crisis support enhancements (\$3,318); continue development of modifications begun in PE 0305159B (as described in the Joint Military Intelligence Programs (JMIP) Congressional Justification Book) to DMA's production system which will change processes to allow the exploitation of alternative commercial imagery sources (e.g., LANDSAT, SPOT and emerging one- and three-meter commercial systems), Synthetic Aperture Radar, and foreign national sources to enhance primary data gathering capability (\$9,354); continue modernization of the Gravity & Geodesy portion of the DMA MC&G production system (\$650); begin initial design and development for implementation of the process for global transmission of Global Geospatial Information (\$300); continue engineering development of HYSAS (\$5,364); continue reconfiguration of mainframe computer architecture (\$2,313); begin design of new interfaces to the MCS (\$1,198); continue development of the Navigation Safety System (\$2,325); and perform other MC&G new process activities (\$2,541).
- (U) FY 1997: Continue operability improvements on the delivered DPS to improve performance (\$4,251); continue crisis support enhancements (\$3,500); continue development and begin delivery of modifications which will change processes to allow the exploitation of alternative commercial and foreign imagery sources (\$13,765); continue modernization of the Gravity & Geodesy portion of the DMA MC&G production system (\$650); continue engineering development of HYSAS (\$9,850); continue design and begin delivery of new interfaces to the MCS (\$816); continue development of the Navigation Safety System (\$3,153); begin migration of the DMA MC&G production system (\$10,000); begin development of the capability to exploit imagery from the Enhanced Imagery System (EIS) (\$24,100); and perform other MC&G new process activities (\$25).

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

R-1 Item Nomenclature
Program Element (PE): DMA MC&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 200 New Processes	20,986	38,808	70,110	41,366	64,160	78,269	32,583	Cont	Cont

C. (U) Other Program Funding Summary

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Procurement:	20,901	9,605	15,945 ¹	17,242 ¹	15,550 ¹	14,643 ¹	14,840 ¹	Cont	Cont

Related RDT&E
 Program Element 0305159B, Defense
 Reconnaissance Support Activities

Cont

D. (U) Schedule Profile

	FY 1995				FY 1996				FY 1997			
	1	2	3	4	1	2	3	4	1	2	3	4
Hydrographic Source Assessment System (HYSAS)												D
Mainframe Computer Reconfiguration												
Modernized Catalog System (MCS)			AOC					D				
Crisis Support Enhancements				C					D			
Military Intelligence Integrated Data System/Integrated Data Base (MIIDS/IDB)				AOC		D				C		
Alternative Commercial Source Exploitation										D	D	
Transmission of Global Geospatial Mapping Information							AOC				D	
Digital Production System (DPS)	AOC			D	AOC	D		D	AOC	D		D
Operability Improvements								AOC				D
Navigation Safety System												
Migration of MC&G Production System											AOC	
Enhanced Imagery System (EIS)									AOC			

AOC-Award of Contract

D-Delivery

C-Completion

¹Funds identified in FY 1997-FY 2001 have been transferred to the Operations and Maintenance appropriation in accordance with expense/investment criteria policy change.

Exhibit R-2

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Defense Mapping Agency FY 1997 Budget Estimates

RDTEG Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDTEG, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): DMA MCG Production System Improvement/03051398

A. Project Cost Breakdown (\$ in Thousands)

Project 200 New Processes

	FY 1995	FY 1996	FY 1997
Project Cost Categories:			
Primary Hardware Development	97	2,375	5,399
Ancillary Hardware Development		8	
Development Support Equipment			
Acquisition	611	287	76
Research Support Equipment			
Acquisition	40	1,141	7
Software Development	4,664	7,366	14,020
Licenses	565	1,789	1,753
Systems Engineering	3,591	10,013	19,460
Training Development	464	644	1,713
Integrated Logistics Support	615	831	1,850
Quality Assurance	493	516	491
Reliability, Maintainability, and Availability	97	159	561
Configuration Management	1,127	1,560	2,174
Technical Data	837	893	1,262
Developmental Test and Evaluation	1,736	2,197	3,605
Operational Test and Evaluation	628	629	4,137
Contractor Engineering Support	2,340	3,431	5,539
Government Engineering Support	441	730	2,033
Program Management Support	1,037	1,704	2,244
Program Management Personnel	554	408	701
Travel	432	1,137	1,753
Research Personnel	80	62	210
Miscellaneous	537	928	1,122
TOTAL	20,986	38,808	70,110

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Exhibit R-3

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Defense Mapping Agency FY 1997 Budget Estimates

RDTE Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDTE, Defense-Wide/7

R-1 Item Nomenclature
Program Element (PE): DMA M&G Production System Improvement/0305139B

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project 200 New Processes										
Mainframe Architecture Various	SS/CPAF/MIPR	Various	5,405	5,405	5,156	0	249	0	0	5,405
UNISYS Reengineering and Modernization Various	C/CPAF/Reqn	Dec-94	4,257	4,257	516	1,916	1,825	0	0	4,257
Alternative Commercial Source Exploitation Various	Various	Jul-95	28,119	28,119	0	0	9,354	13,765	5,000	28,119
New Product Processes into DPS Intergraph	SS/CPAF/Reqn	Oct-94	3,919	3,919	1,240	2,566	113	0	0	3,919
Product and Extraction Data Base TASC	SS/CPAF/MIPR	Aug-94	2,454	2,454	1,268	807	379	0	0	2,454
Aeronautical Data Maintenance Intergraph	C/CPAF/Reqn	Apr-95	Cont	Cont	220	300	300	0	Cont	Cont
Hydrographic Source Assessment System E-Systems	C/CPAF/Reqn	Sep-94	29,400	29,400	3,586	2,700	5,364	9,850	7,900	29,400
Interface to DIA Systems Various	SS/CPAF/Reqn	Jun-95	279	279	0	279	0	0	0	279
Crisis Support Capability Various	SS/CPAF/Reqn	Jun-95	12,830	12,830	1,308	2,904	3,318	3,500	1,800	12,830
Modernized Catalog System Martin Marietta	C/CPFF/Reqn	Jun-94	4,768	4,768	3,234	1,534	0	0	0	4,768
DPS Operability Requirements Various	Various	Various	Cont	Cont	0	0	11,445	3,251	Cont	Cont

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Defense Mapping Agency FY 1997 Budget Estimates

RDTE Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDTE, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): DMA MC&G Production System Improvement/0305139B

B. Budget Acquisition History and Planning Information (Continued)

Contractor or Government Performing Activity	Contract Method/Type Office of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project 200 New Processes										
Modernized Catalog System Interfaces Martin Marietta	C/CPFF/Reqn	Jun-96	2,514	2,514	0	0	1,198	816	500	2,514
Transmission of Digital Products Unknown	C/CPAF/Reqn	Aug-95	Cont	Cont	0	0	300	0	Cont	Cont
Navigation Safety System Various	C/CPAF/Reqn	Aug-95	11,207	11,207	0	729	2,325	3,153	5,000	11,207
System Operability Improvements Various	SS/CPAF/Reqn	Various	8,111	8,111	6,170	141	800	1,000	0	8,111
Joint Engineering Team Actions Various	SS/CPAF/Reqn	Various	2,539	2,539	2,193	346	0	0	0	2,539
Productivity Enhancements Unknown	C/CPAF/Reqn	Dec-94	Cont	Cont	0	0	1,000	0	Cont	Cont
Migration of MC&G Production System Unknown	C/CPAF	Jun-97	Cont	Cont	0	0	0	10,000	Cont	Cont
Exploitation of Enhanced Imagery System Unknown	C/CPAF	Dec-96	78,900	78,900	0	0	0	24,100	54,800	78,900
Miscellaneous Various	Various	Various	Cont	Cont	12,721	6,764	838	675	Cont	Cont
Product Development Organizations Total										
Support and Management Organizations Total			0	0	0	0	0	0	0	0
Test and Evaluation Organizations Total			0	0	0	0	0	0	0	0
Government Furnished Property Total			0	0	0	0	0	0	0	0

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Defense Mapping Agency FY 1997 Budget Estimates

RD742 Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RD74E, Defense-Wide/7

R-1 Item Nomenclature

Program Element (PE): DMA MC&G Production System Improvement/03051398

B. Budget Acquisition History and Planning Information (Continued)

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations									
<u>Project 200 New Processes</u>									
Product Development Property Total				0	0	0	0	0	0
Support and Management Property Total				0	0	0	0	0	0
Test and Evaluation Property Total				0	0	0	0	0	0
Subtotal Product Development				37,612	20,986	38,808	70,110	Cont	Cont
Subtotal Support and Management				0	0	0	0	0	0
Subtotal Test and Evaluation				0	0	0	0	0	0
Total Project:				37,612	20,986	38,808	70,110	Cont	Cont

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Defense Mapping Agency FY 1997 Budget Estimates
RDTE&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDTE&E, Defense-Wide/7		R-1 Item Nomenclature					Program Element (PE): DMA MC&G Production System Improvement/0305139B		
Cost (in \$ Thousands)	Project 300 New Concepts	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Total
		11,198	17,157	16,321	14,980	22,900	18,512	20,040	Cost to Complete
									Cont
									Cont
									Cont

(U) Project Justification Narrative:

- (U) As the DoD lead for Mapping, Charting and Geodesy (MC&G), DMA is responsible for advancing the state-of-the-art in MC&G production and exploitation technology; addressing Global Geospatial Information issues embedded in DoD Science and Technology thrust areas identified by OSD/Director, Defense Research and Engineering; and participating in national and international MC&G standards initiatives. Concept initiatives in support of this mission include:
 - The Enhanced Product Prototyping Environment (EPPE) which provides a rapid product development and system prototyping capability to support emerging Service requirements for digital information and products.
 - The MC&G Utility Software Environment (MUSE) which is a joint program with the military service labs to develop and distribute verified and validated standard MC&G utility software to users throughout the DoD.
 - Support to national and international standards organizations to develop national and international MC&G standards in cooperation with other MC&G producing organizations such as the National Science Foundation, the North Atlantic Treaty Organization, and the International Hydrographic Organization.
 - The Interoperable Map Software project which will develop/reengineer joint mapping software for use throughout DoD, resulting in interoperable C4I systems.
 - Beginning in FY 1996, this project also includes initiatives previously identified under Defense Reconnaissance Support Activities (PE 0305159B) including evaluation of developing or planned advanced systems with potential for MC&G data exploitation. Developments address data extraction algorithms, accuracy initiatives, and operational scenarios.
- (U) FY 1995: Performed concept investigation and began development of Global Geospatial Information and Services (GGI&S) data warehouse and related concepts (\$3,260); continued MC&G Utility Software Environment (MUSE) development and implementation (\$2,000); continued technical support to national and international standards organizations (\$1,248); continued technology studies (\$1,530); performed DPS migration studies (\$682); supported prototyping efforts and concept studies with the Enhanced Product Prototyping Environment (EPPE) (\$850); and performed other activities supporting new concepts (\$1,628).
- (U) FY 1996: Continue technology studies related to migration (\$1,675); continue development of GGI&S data warehouse and related concepts (\$2,555); continue MUSE development and implementation (\$1,600); continue technical support to national and international standards organizations (\$800); continue development of concepts begun in PE 0305159B which include initiatives to continue primary source activities to improve accuracy and quality control processes (\$2,160) and begin requirements development for supporting source assessment and accuracy evaluation operations capabilities (\$857); perform DPS migration studies (\$4,000); develop concept for exploitation of advanced sensors; e.g., hyper-spectral investigation (\$2,500); continue support to EPPE (\$500); and perform other activities supporting new concepts (\$510).

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&S Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

• (U) FY 1997: Continue technology studies (\$1,800); complete initial development and begin preplanned process improvements of GGI&S data warehouse and related concepts (\$2,250); continue MUSE development and implementation (\$2,000); continue technical support to national and international standards organizations (\$1,100); continue investigations of advanced sensor sources; e.g., hyper-spectral investigation (\$1,800); continue to improve accuracy and quality control processes (\$3,321); continue requirements development for supporting source assessment and accuracy evaluation operations capabilities (\$700); continue support to EPPE (\$500); begin development of Interoperable Map Software (\$2,800); and perform other activities supporting new concepts (\$50).

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**Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature
Program Element (PE): DMA MC&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 300 New Concepts	11,198	17,157	16,321	14,980	22,900	18,512	20,040	Cont	Cont

C. (U) Other Program Funding Summary

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Procurement:	5,031	12,058	2,200 ¹	3,900 ¹	9,050 ¹	11,050 ¹	11,250 ¹	Cont	Cont

Related RDT&E
Program Element 0305159B, Defense
Reconnaissance Support Activities

5,750

Cont

D. (U) Schedule Profile

	FY 1995				FY 1996				FY 1997			
	1	2	3	4	1	2	3	4	1	2	3	4
Global Geospatial Mapping Information and Services (GGMI&S)	AOC					AOC			D			
Technology Studies	AOC			D	AOC			D	AOC			D
MC&G Utility Software Environment (MUSE)	AOC		D		AOC			D	AOC			D
Support to MC&G Standards Organizations	AOC			D	AOC			D	AOC			D
Primary Source Improvement Activities					AOC			AOC D				
Source Assessment System Upgrades						AOC		D		AOC		D
Primary Source Operations											AOC D	
Enhanced Product Prototyping Environment (EPPE)		AOC		D	AOC			D	AOC			D
Advanced Sensors (hyper spectral investigation)						AOC		D	AOC			D
Interoperable Map Software										AOC		
DPS Migration Studies						AOC D	D					

AOC-Award of Contract

D-Delivery

¹Funds identified in FY 1997-FY 2001 have been transferred to the Operations and Maintenance appropriation in accordance with expense/investment criteria policy change.

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Defense Mapping Agency FY 1997 Budget Estimates

RD4E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RD4E, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE) 1 DMA MC&G Production System Improvement/03051398

A. Project Cost Breakdown (\$ in Thousands)

Project 100 New Concepts

	FY 1995	FY 1996	FY 1997
Project Cost Categories:			
Primary Hardware Development		1,253	212
Ancillary Hardware Development			
Development Support Equipment		69	83
Acquisition	77		
Research Support Equipment			
Acquisition		1,704	1,483
Software Development	588	69	100
Licenses	78	3,792	3,560
Systems Engineering	3,561	121	16
Training Development		121	16
Integrated Logistics Support		36	18
Quality Assurance	45		
Reliability, Maintainability, and Availability		17	5
Configuration Management	22	69	20
Technical Data	806	824	590
Developmental Test and Evaluation	354	1,561	607
Operational Test and Evaluation	22	1,326	215
Contractor Engineering Support	3,192	4,187	6,251
Government Engineering Support	1,949	1,596	2,609
Program Management Support	482	395	507
Program Management Personnel			
Travel	22	17	29
Research Personnel			
Miscellaneous			
TOTAL	11,198	17,157	16,321

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Defense Mapping Agency FY 1997 Budget Estimates

Date: March 1996

RDTE&E Program Element/Project Cost Breakdown (R-3)

Appropriation/Budget Activity: RDTE&E, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE): DMA M&G Production System Improvement/03051398

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project 300 New Concepts										
Primary System Operations (S18)										
SEG 18	MIPR	Various	Cont	Cont	0	0	857	700	Cont	Cont
Primary Source Improvement Activities										
Various	SS/CPAF/Regn	Various	Cont	Cont	0	0	2,160	3,321	Cont	Cont
Advanced Sensor Activities										
Various	MIPR	Various	Cont	Cont	0	0	1,500	1,800	Cont	Cont
Interferometric SAR										
Unknown	C/CPAF/Regn	Jun-96	1,000	1,000	0	0	1,000	0	0	1,000
Technology Studies										
Various	Various	Various	Cont	Cont	1,497	1,530	675	800	Cont	Cont
Data Warehouse										
Various	C/CPAF/Regn	Jun-95	Cont	Cont	500	3,260	2,555	2,250	Cont	Cont
Venture Technology										
Various	C/CPAF/Regn	Dec-94	Cont	Cont	0	887	1,000	1,000	Cont	Cont
Support to M&G Standards										
Unknown	C/FP/Regn	Jul-95	Cont	Cont	948	1,248	800	1,100	Cont	Cont
Various	SS/FP/MIPR/PO/Regn									
M&G Utility Software Environment										
Various	SS/FP/MIPR	Jan-95	Cont	Cont	1,827	2,000	1,600	2,000	Cont	Cont
Interoperable Map Software										
Unknown	MIPR	Mar-97	Cont	Cont	0	0	0	2,800	Cont	Cont
DPS Migration Studies										
Various	Various	Feb-96	4,682	4,682	0	682	4,000	0	0	4,682
Miscellaneous										
Various	Various	Various	Cont	Cont	2,044	1,591	1,010	550	Cont	Cont
Product Development Organizations Total										
			Cont	Cont	6,816	11,198	17,157	16,321	Cont	Cont
Support and Management Organizations Total										
			0	0	0	0	0	0	0	0
Test and Evaluation Organizations Total										
			0	0	0	0	0	0	0	0
Government Furnished Property Total										
			0	0	0	0	0	0	0	0

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Defense Mapping Agency FY 1997 Budget Estimates

RDTEG Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDTEG, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): DMA MC&G Production System Improvement/03051398

B. Budget Acquisition History and Planning Information (Continued)

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations									
Project 300 New Concepts									
Product Development Property Total				0	0	0	0	0	0
Support and Management Property Total				0	0	0	0	0	0
Test and Evaluation Property Total				0	0	0	0	0	0
Subtotal Product Development									
Subtotal Support and Management				6,816	11,198	17,157	16,321	Cont	Cont
Subtotal Test and Evaluation				0	0	0	0	0	0
Total Project:				6,816	11,198	17,157	16,321	Cont	Cont

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Defense Mapping Agency FY 1997 Budget Estimates
RDTE&G Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDTE&G, Defense-Wide/7

R-1 Item Nomenclature

Program Element (PE): Defense Reconnaissance Support Activities/0305159B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Total Program Element (PE) Cost	15,750	See Note						Cont	Cont
Project 200 New Processes	10,000							Cont	Cont
Project 300 New Concepts	5,750							Cont	Cont

A. (U) Mission Description and Budget Item Justification:

This program evaluates and implements commercial and developing or planned advanced systems for potential MC&G data exploitation. Developments address data extraction algorithms and operational scenarios. Additional activities include test and evaluation to ensure source material support of Mapping, Charting, and Geodesy (MC&G) requirements.

Program Element 0305159B is found in Budget Activity 7 (Operational Systems Development) because the effort funded under this element supports the DMA MC&G production system.

B. (U) Program Change Summary

	FY 1995	FY 1996	FY 1997	Total Cost
--	---------	---------	---------	------------

FY 1996/1997 President's Budget	19,548	000	000	Cont
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Adjustments to Appropriated Value
 Reprogrammed to MC&G Production System
 Improvement (PE 0305139B)

-3,798

Current Budget Submit

15,750

000

000

Cont

Change Summary Explanation:

Beginning in FY 1996, this Program Element merged into DMA MC&G Production System Improvement (PE 0305139B) because the activities contained evolved into enhancements to the overall DMA MC&G production system.

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Defense Mapping Agency FY 1997 Budget Estimates
 RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7		R-1 Item Nomenclature					Support Activities/0305159B		
		Program Element (PE): Defense Reconnaissance							
		FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Total
Cost (in \$ Thousands)									Cost
Project 200 New Processes		10,000							Cont
									Cont

(U) Project Justification Narrative:

- (U) As a Combat Support Agency, DMA is responsible for establishing and maintaining the production processes required to support Service and Command Mapping, Charting, and Geodesy (MC&G) requirements. The initiative within this project implements MC&G data exploitation from alternative commercial imagery systems (e.g., LANDSAT, SPOT and emerging one- and three-meter commercial systems), Synthetic Aperture Radar, and foreign national sources. Developments address data extraction algorithms and operational scenarios and include development of capabilities to process, integrate, and archive commercial image source into the existing DMA production system and increase crisis response capability.
- (U) FY 1995: Awarded contract and began development of modifications to DMA's production system which will allow the exploitation of alternative commercial/other imagery sources (\$10,000). These efforts are described in the JMIP Congressional Justification Book.
- (U) FY 1996: See DMA MC&G Production System Improvement (PE 0305139B).
- (U) FY 1997: See DMA MC&G Production System Improvement (PE 0305139B).

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature
Program Element (PE): Defense Reconnaissance Support Activities/0305159B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Cost to Total
Project 200 New Processes	10,000							Cont	Cont

C. (U) Other Program Funding Summary

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
--	---------	---------	---------	---------	---------	---------	---------	------------------	------------

Related RDT&E:
Program Element 0305139B, DMA MC&G
Production System Improvement 20,986

Cont

D. (U) Schedule Profile

Alternate Source Exploitation	FY 1995			
	1	2	3	4
AOC-Award of Contract				AOC

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Defense Mapping Agency FY 1997 Budget Estimates

RDT&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

R-1 Item Nomenclature
Program Element (PE):

Defense Reconnaissance Support Activities/030515

A. Project Cost Breakdown (\$ in Thousands)

Project 200 New Processes

FY 1996

FY 1997

Project Cost Categories:

Primary Hardware Development	1,150	
Ancillary Hardware Development		
Development Support Equipment		
Acquisition		
Research Support Equipment		
Acquisition		
Software Development	2,950	
Licenses	380	
Systems Engineering	4,230	
Training Development		
Integrated Logistics Support	110	
Quality Assurance		
Reliability, Maintainability,	110	
and Availability	150	
Configuration Management		
Technical Data		
Developmental Test and		
Evaluation		
Operational Test and Evaluation	920	
Contractor Engineering Support		
Government Engineering Support		
Program Management Support		
Program Management Personnel		
Travel		
Research Personnel		
Miscellaneous		
TOTAL	10,000	

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Defense Mapping Agency FY 1997 Budget Estimates

RDT&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE): Defense Reconnaissance Support Activities/030515

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
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Product Development Organizations

Project 200 New Processes

Alternate Commercial Source Exploitation Various Jul-95 Cont 4,488 10,000 Cont

Product Development Organizations Total Cont 4,488 10,000 Cont

Support and Management Organizations Total 0 0 0 0 0

Test and Evaluation Organizations Total 0 0 0 0 0

Government Furnished Property Total 0 0 0 0 0

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
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Product Development Property Total 0 0 0 0

Support and Management Property Total 0 0 0 0

Test and Evaluation Property Total 0 0 0 0

Subtotal Product Development 4,488 10,000 Cont

Subtotal Support and Management 0 0 0

Subtotal Test and Evaluation 0 0 0

Total Project: 4,488 10,000 Cont

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

R-1 Item Nomenclature
Program Element (PE): Defense Reconnaissance Support Activities/0305159B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 300 New Concepts								Cont	Cont
								Cont	Cont

(U) Project Justification Narrative:

- (U) As the DoD Program Manager for Mapping, Charting, and Geodesy (MC&G), DMA is responsible for advancing the state of the art in MC&G production and exploitation technology, and addressing the MC&G issues embedded in DoD Science and Technology thrust areas identified by OSD/Director, Defense Research and Engineering. Concept initiatives in support of this mission include evaluation of developing or planned advanced systems with potential for MC&G data exploitation. Developments address data extraction algorithms, accuracy initiatives, and operational scenarios.
- (U) FY 1995: Continued studies and requirements development for the design, integration, and exploitation of new national sensors into the DMA production system (\$1,040); analyzed and integrated new accuracy requirements into existing DMA processes (\$3,210); delivered a capability to interface with the Requirements Management System (\$1,500). These efforts are described in the JMIP Congressional Justification Book.
- (U) FY 1996: See DMA MC&G Production System Improvement (PE 0305139B).
- (U) FY 1997: See DMA MC&G Production System Improvement (PE 0305139B).

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Defense Mapping Agency FY 1997 Budget Estimates
RDTE&R Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDTE&R, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): Defense Reconnaissance Support Activities/0305159B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 300 New Concepts	5,750							Cont	Cont

C. (U) Other Program Funding Summary

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
								Cont	Cont

Procurement:

731

Related RDTE&R

Program Element 0305139B, MC&G
 Production System Improvement

11,198

Cont Cont

D. (U) Schedule Profile

	FY 1995			
	1	2	3	4
Primary Source Improvement Activities	AOC		D	
Source Assessment System Upgrades	AOC	AOC	D	D
Primary Source Operations		D		AOC

AOC-Award of Contract
 D-Delivery

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Defense Mapping Agency FY 1997 Budget Estimates

RDT&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7
 Program Element (PE): Defense Reconnaissance Support Activities/030515

A. Project Cost Breakdown (\$ in Thousands)

Project 300 New Concepts	FY 1995	FY 1996	FY 1997
Project Cost Categories:			
Primary Hardware Development	302		
Ancillary Hardware Development			
Development Support Equipment			
Acquisition			
Research Support Equipment			
Acquisition			
Software Development	529		
Licenses	1		
Systems Engineering	552		
Training Development	30		
Integrated Logistics Support	30		
Quality Assurance	8		
Reliability, Maintainability, and Availability	8		
Configuration Management	15		
Technical Data	15		
Developmental Test and Evaluation	302		
Operational Test and Evaluation	302		
Contractor Engineering Support	3,090		
Government Engineering Support	566		
Program Management Support			
Program Management Personnel			
Travel			
Research Personnel			
Miscellaneous			
TOTAL	5,750		

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Defense Mapping Agency FY 1997 Budget Estimates

RDTEB Program Element/Project Cost Breakdown (R-3) Date: March 1996

Appropriation/Budget Activity: RDTEB, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE): Defense Reconnaissance Support Activities/030515

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project 300 New Concepts										
Primary System Operations (S18) SEG 18	MIPR	Various	Cont	Cont	4,247	1,500				Cont
Primary Source Improvement Activities Various	SS/CPAF/Regn	Various	Cont	Cont	12,321	3,210				Cont
Advanced Sensor Activities Various	MIPR	Various	Cont	Cont	2,127	1,040				Cont
Product Development Organizations Total										
Support and Management Organizations Total			0	0	0	0				0
Test and Evaluation Organizations Total			0	0	0	0				0
Government Furnished Property Total			0	0	0	0				0
Contract Method/Type of Funding										
Award or Obligation Date										
Delivery Date										
Total prior to FY 1995										
Budget FY 1995										
Budget FY 1996										
Budget FY 1997										
Budget to Complete										
Total Program										

Product Development Property Total										
Support and Management Property Total										
Test and Evaluation Property Total										
Subtotal Product Development										
Subtotal Support and Management										
Subtotal Test and Evaluation										
Total Project:										
					18,695	5,750				Cont
					0	0				0
					0	0				0
					0	0				0
					18,695	5,750				Cont

UNCLASSIFIED

Exhibit R-3